

Serial No. 10/647,057

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Docket No. 30296A-DIV1

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Listing of Claims:

1. (Previously Presented) An isolated nucleotide sequence having a nucleotide sequence having at least about 87% sequence homology with a sequence that is a truncated form of SEQ ID No. 8, said truncated form having a length of at least 1017 nucleotides.
2. (Canceled)
3. (Canceled)
4. (Original) The sequence of claim 1, said sequence having at least about 87% sequence homology with a sequence selected from the group consisting of SEQ ID Nos. 8-14.
5. (Previously Presented) The sequence of claim 4, said sequence having at least about 95% sequence homology with a sequence selected from the group consisting of SEQ ID Nos. 8-14.
6. (Previously Presented) An expression vector containing a nucleotide sequence having at least about 87% sequence homology with a truncated sequence from SEQ ID No. 8, said truncated sequence having a length of at least 1017 nucleotides.
- 7-8. (Canceled)

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9. (Original) The vector of claim 6, said nucleotide sequence having at least about 87% sequence homology with a sequence selected from the group consisting of SEQ ID Nos. 8-14.

10. (Original) The vector of claim 6, said nucleotide sequence having at least about 95% sequence homology with a sequence selected from the group consisting of SEQ ID Nos. 8-14.

11. (Currently Amended) An isolated nucleotide sequence which differs from that of claim 1 due to a mutation event selected from the group consisting of point mutations, deletions, insertions and rearrangements, said nucleotide sequence having at least about 87% sequence homology with a sequence that is a truncated form of SEQ ID No. 8, said truncated form having a length of at least 1017 nucleotides.

12. (Withdrawn) A vaccine effective for conferring protective immunity against *F. necrophorum* comprising the protein expressed by a portion of SEQ ID No. 8 and a suitable pharmacologically compatible carrier.

13. (Withdrawn) The vaccine of claim 12, said vaccine being prepared by a method comprising the steps of:

a) providing the *F. necrophorum* gene which expresses leukotoxin;

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- b) truncating said *F. necrophorum* gene into a plurality of discrete nucleotide sequences, each of said discrete nucleotide sequences encoding for a respective polypeptide sequence;
- c) expressing and recovering said encoded polypeptide sequence expressed by at least one of said discrete nucleotide sequences;
- d) inactivating said recovered polypeptide sequence; and
- e) combining said inactivated polypeptide sequence with said suitable pharmacologically compatible carrier to produce said vaccine.

14. (Withdrawn) The vaccine of claim 13, said discrete nucleotide sequences having a sequence having at least about 50% sequence homology with a sequence selected from the group consisting of SEQ ID Nos. 9-14.

15. (Withdrawn) The vaccine of claim 13, further comprising the step of expressing and recovering said respective polypeptides using said nucleotide.

16. (Previously Presented) A recombinantly derived nucleotide sequence that encodes a polypeptide effective in conferring protective immunity against *F. necrophorum* infection in mice, said sequence comprising a truncated form of SEQ ID No. 8 having a length of at least 1017 nucleotides.

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17. (Previously Presented) The sequence of claim 16, said sequence having at least about 87% sequence homology with a sequence selected from SEQ ID Nos. 8- 14.

18. (Previously Presented) An isolated nucleotide sequence encoding a peptide sequence that is a truncated form of SEQ ID No. 1, said truncated form having therein at least 339 contiguous amino acids of SEQ ID No. 1.

19. (Previously Presented) The nucleotide sequence of claim 18, said peptide sequence being selected from the group consisting of SEQ ID Nos. 2-7.

20. (New) The isolated nucleotide sequence of Claim 1, wherein said nucleotide sequence encodes peptides having a characteristic, selected from the group consisting of recognition by anti-native leukotoxin antibodies, recognition of native leukotoxin, in the presence of antisera, and neutralization of the activity of native leukotoxin against polymorphonuclear leukocytes, in the presence of antisera.

21. (New) The isolated nucleotide sequence of Claim 20, wherein said nucleotide sequence ranges in size from 1.1kb to 2.8kb.